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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,442	09/26/2003	Chandandumar Aladahalli	DB001050-001	8430
24122	7590	06/21/2006	EXAMINER	
THORP REED & ARMSTRONG, LLP ONE OXFORD CENTRE 301 GRANT STREET, 14TH FLOOR PITTSBURGH, PA 15219-1425			HIRL, JOSEPH P	
			ART UNIT	PAPER NUMBER
			2129	

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

10/672,442

### Applicant(s)

ALADAHALLI ET AL.

### Examiner

Joseph P. Hirl

### Art Unit

2129

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date A1, A2.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-44 are pending in this application.

#### ***Information to be provided***

2. In accordance with 37 CFR 1.105, applicant is to provide a copy of XP002278320 which was available on the internet on or about August 21, 2002 (See page 1 of the PCT /US 03/30523 International Search Report).

#### ***Claim Objections***

3. Claims 8, 14, 19, 30, 36 and 41 have limitations on "said rankings and said rankings." The second "said rankings" is redundant and must be removed.

#### ***Specification Objections***

4. Claims 8, 14, 19, 30, 36 and 41 have a "geometric progression" limitation which is not addressed in the specification and from the perspective of the Examiner is incongruous to the substance of the disclosure. This objection must be addressed and resolved.

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-44 are rejected under 35 U.S.C. § 101 for nonstatutory subject matter. The computer system must set forth a practical application of § 101 judicial exception to produce a real-world result. *Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77. The invention is ineligible because it has not been limited to a substantial practical application.

In determining whether the claim is for a “practical application,” the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather that the final result achieved by the claimed invention is useful, tangible and concrete. If the claim is directed to a practical application of the § 101 judicial exceptions producing a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S. C. § 101.

The invention must be for a practical application and either:

- 1). specify transforming (physical thing – article) or
- 2). have the Final Result (not the steps) achieve or produce a useful (specific, substantial and credible), concrete (substantially repeatable / non unpredictable), and

tangible (real world / non abstract) result

(tangibility is the opposite of abstractness).

A claim that is so broad that it reads on both statutory and non-statutory subject matter, must be amended, and if the specification discloses a practical application but the claim is broader than the disclosure such that it does not require the practical application, then the claim must be amended.

Claims that cite “performing a pattern search, characterized by driving the search with a metric other than step size,” “determining the effect of a plurality of moves on a set of components,” and ranking includes one of analytically, probabilistically and heuristically ranking” are not statutory.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Lundahl et al (USPN 6,636,862, referred to as **Lundahl**).

**Claims 1, 23**

Lundahl anticipates a method of performing a pattern based search, characterized by driving the search with a metric other than step size (**Lundahl**, c 38:19-54; Examiner's Note (EN): ¶ 11 applies;  $f_x$  is a metric; see Lundhal @ c42:20-32 re networked personal computer).

**Claims 2, 24**

Lundahl anticipates wherein the metric for driving the search is based on a change in value of an objective function (**Lundahl**, c 38:19-54; EN: the objective function is the metric).

**Claims 3, 25**

Lundahl anticipates the metric for driving the search is a sensitivity of an objective function to component moves (**Lundahl**, c 38:19-54; EN: component moves are those characteristics that make up the objective function).

**Claims 4, 26**

Lundahl anticipates determining the effect of a plurality of moves on a set of components(**Lundahl**, c 38:19-54; EN: component moves are those characteristics that make up the objective function); and performing a pattern based search based on said determining (**Lundahl**, c 38:19-54; EN: component moves are those characteristics that make up the objective function).

**Claims 5, 27**

Lundahl anticipates said determining includes ranking each of said plurality of moves based on the change each move has on an objective function and ordering said moves from highest to lowest ranking (**Lundahl**, c 32:5-22).

**Claims 6, 12, 17, 22, 28, 34, 39, 44**

Lundahl anticipates said ranking includes one of analytically, probabilistically and heuristically ranking (**Lundahl**, c 32:5-22; EN: analytically concerns any numeric process).

**Claims 7, 13, 18, 29, 35, 40**

Lundahl anticipates dividing the range between highest and lowest rankings into a plurality of intervals, and assigning each of the moves to one of said intervals (**Lundahl**, c 32:5-22; EN: ¶ 11 applies; moves refer to any change in a variable or metric).

**Claims 8, 14, 19, 30, 36, 41**

Lundahl anticipates assigning is performed according one of a geometric progression based on said rankings and said rankings (**Lundahl**, c 32:5-22; EN: ¶ 11 applies; the specification does not teach “geometric progression” and therefore this term is interpreted to merely mean a division).

**Claims 9, 31, 43**

Lundahl anticipates determining includes deriving a function that relates moves to changes in an objective function (**Lundahl**, c 38:19-32; EN: moves are synonymous with changes to the objective function).

**Claims 10, 15, 20, 32, 37, 42**

Lundahl anticipates determining includes determining the non-intersecting volume between an object and itself after applying a move (**Lundahl**, c 2:36-55; EN: the

non-interesting volume between something and itself is the region excluding something or it is just the cluster).

**Claims 11, 16, 33, 38**

Lundahl anticipates ranking each of a plurality of moves on a set of components based on the effect each move has on an objective function; and ordering the moves from those moves having the highest ranking to those moves having the lowest ranking (Lundahl, c 32:5-22).

**Claim 21**

Lundahl anticipates deriving a function that relates moves to changes in an objective function (Lundahl, c 38:19-32).

***Examination Considerations***

8. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the



art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

9. Examiner's Notes are provided with the cited references to prior art to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and spirit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but a link to prior art that one of ordinary skill in the art would find inherently appropriate.

10. Unless otherwise annotated, Examiner's statements are to be interpreted in reference to that of one of ordinary skill in the art. Statements made in reference to the condition of the disclosure constitute, on the face of it, the basis and such would be obvious to one of ordinary skill in the art, establishing thereby an inherent prima facie statement.

11. Examiner's Opinion: ¶¶ 8-10 apply. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

### ***Conclusion***

12. The prior art of record and not relied upon is considered pertinent to applicant's disclosure.

- Cagan et al, USPN 5,825,660
- Dori, USPubN 2002/0038206
- Hampshire, II, USPubN 2003/0088532
- Agrafiotis et al, USPn 6,453,246
- Dillon et al, USPubN 2003/0088562

13. Claims 1-44 are rejected.

***Correspondence Information***

14. Any inquiry concerning this information or related to the subject disclosure should be directed to the Primary Examiner, Joseph P. Hirl, whose telephone number is (571) 272-3685. The Examiner can be reached on Monday – Thursday from 6:00 a.m. to 4:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, David R. Vincent can be reached at (571) 272-3080.

Any response to this office action should be mailed to:

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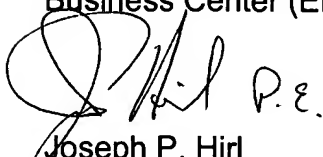
Alexandria, Virginia 22313,

(located on the first floor of the south side of the Randolph Building);

or faxed to:

(571) 273-8300 (for formal communications intended for entry.

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Joseph P. Hirl  
Primary Examiner  
June 13, 2006